

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

PTO/SB/01 (03-01)
Approved for use through 10/31/2002. OMB 0651-0042
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

COPY OF PAPERS
ORIGINALLY FILED
02/11/02

| | | | |
|--|--|--------------------------|--------------|
| DECLARATION FOR UTILITY OR DESIGN PATENT APPLICATION (37 CFR 1.63) | | Attorney Docket Number | 283014-00030 |
| | | First Named Inventor | Youngfei Zhu |
| | | COMPLETE IF KNOWN | |
| | | Application Number | 09/932,749 |
| <input type="checkbox"/> Declaration Submitted with Initial Filing OR <input checked="" type="checkbox"/> Declaration Submitted after Initial Filing (surcharge (37 CFR 1.16 (e)) required) | | Filing Date | 8/17/01 |
| | | Group Art Unit | 2817 |
| | | Examiner Name | |

As a below named inventor, I hereby declare that:

My residence, mailing address, and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

ELECTRONICALLY TUNABLE COMBLINE FILTERS TUNED BY TUNABLE DIELECTRIC CAPACITORS

(Title of the Invention)

the specification of which

☐ is attached hereto

OR

☒ was filed on (MM/DD/YYYY) 08/17/2001 as United States Application Number or PCT International

Application Number 09/932,749 and was amended on (MM/DD/YYYY) (if applicable).

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment specifically referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT International filing date of the continuation-in-part application.

I hereby claim foreign priority benefits under 35 U.S.C. 119(a)-(d) or (f), or 365(b) of any foreign application(s) for patent, inventor's or plant breeder's rights certificate(s), or 365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below, by checking the box, any foreign application for patent, inventor's or plant breeder's rights certificate(s), or any PCT international application having a filing date before that of the application on which priority is claimed.

| Prior Foreign Application Number(s) | Country | Foreign Filing Date (MM/DD/YYYY) | Priority Not Claimed | Certified Copy Attached? | |
|-------------------------------------|---------|----------------------------------|--------------------------|--------------------------|--------------------------|
| | | | | YES | NO |
| | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

☐ Additional foreign application numbers are listed on a supplemental priority data sheet PTO/SB/02B attached hereto:

(Page 1 of 2)

Burden Hour Statement: This form is estimated to take 21 minutes to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

PTO/SB/01 (08-01)
 Approved for use through 10/31/2002. GMS 0651-0032
 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

DECLARATION — Utility or Design Patent Application

| | | | | | | | |
|---|--|--------------------------------------|--------------------------|---|--|------------------------------|-------------------|
| Direct all correspondence to: <input type="checkbox"/> | | Customer Number or Bar Code Label | <input type="checkbox"/> | | OR <input checked="" type="checkbox"/> | Correspondence address below | |
| Name Robert P. Lenart | | | | | | | |
| Address Pietragallo, Bosick & Gordon One Oxford Centre, 38th Floor, 301 Grant Street | | | | | | | |
| City Pittsburgh | | | | State PA | | ZIP 15219 | |
| Country United States | | | Telephone (412) 263-4399 | | | Fax (412) 261-0915 | |
| I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon. | | | | | | | |
| NAME OF SOLE OR FIRST INVENTOR: | | | | <input type="checkbox"/> A petition has been filed for this unsigned inventor | | | |
| Given Name (first and middle [if any]) Yongfei | | | | Family Name or Surname Zhu | | | |
| Inventor's Signature <i>Yongfei Zhu</i> | | | | | | Date 11/30/01 | |
| Residence: City Columbia | | | State MD | | Country US | | Citizenship China |
| Mailing Address 5275 Rivendell Lane, Suite 6 | | | | | | | |
| City Columbia | | | State MD | | ZIP 21044 | | Country US |
| NAME OF SECOND INVENTOR: | | | | <input type="checkbox"/> A petition has been filed for this unsigned inventor | | | |
| Given Name (first and middle [if any]) Yu | | | | Family Name or Surname Rong | | | |
| Inventor's Signature | | | | | | Date | |
| Residence: City Germantown | | | State MD | | Country US | | Citizenship China |
| Mailing Address 17806 Bromfield Place | | | | | | | |
| City Germantown | | | State MD | | ZIP 20874 | | Country US |
| <input checked="" type="checkbox"/> Additional inventors are being named on the 2 supplemental Additional Inventor(s) sheet(s) PTO/SB/02A attached hereto. | | | | | | | |

[Page 2 of 2]

PTO/SB02A (10-00)

Approved for use through 10/31/2002. OMB 0651-0032

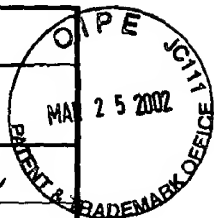
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

| | |
|--------------------|--|
| DECLARATION | ADDITIONAL INVENTOR(S) Supplemental Sheet Page <u>1</u> of <u>2</u> |
|--------------------|--|

| | | | | | |
|---|----------|-----------------------------------|-------------------|---|--|
| Name of Additional Joint Inventor, if any: | | | | <input type="checkbox"/> A petition has been filed for this unsigned inventor | |
| Given Name Kenneth | | Family Name or Surname Hersey | | | |
| Inventor's Signature <i>Kenneth Hersey</i> | | Date 12/5/01 | | | |
| Residence: City Clarksville | State MD | Country US | Citizenship US | | |
| Mailing Address 6509 Burgundy Lane | | | | | |
| Mailing Address | | | | | |
| City Clarksville | State MD | ZIP 21029 | Country US | | |
| Name of Additional Joint Inventor, if any: | | | | <input type="checkbox"/> A petition has been filed for this unsigned inventor | |
| Given Name Khosro | | Family Name or Surname Shamsaifar | | | |
| Inventor's Signature <i>Khosro Shamsaifar</i> | | Date 11/30/01 | | | |
| Residence: City Ellicott City | State MD | Country US | Citizenship Spain | | |
| Mailing Address 2825 Dana Ct. | | | | | |
| Mailing Address | | | | | |
| City Ellicott City | State MD | ZIP 21042 | Country US | | |
| Name of Additional Joint Inventor, if any: | | | | <input type="checkbox"/> A petition has been filed for this unsigned inventor | |
| Given Name Ernest | | Family Name or Surname Ekelman | | | |
| Inventor's Signature <i>Ernest P. Ekelman</i> | | Date 11-30-01 | | | |
| Residence: City Damascus | State MD | Country US | Citizenship US | | |
| Mailing Address 26801 Grace Court | | | | | |
| Mailing Address | | | | | |
| City Damascus | State MD | ZIP 20872 | Country US | | |

Burden Hour Statement: This form is estimated to take 21 minutes to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.



PTO/SB/02A (10-00)

Approved for use through 10/31/2002. OMB 0651-0032

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

| | |
|--------------------|--|
| DECLARATION | ADDITIONAL INVENTOR(S) Supplemental Sheet Page <u>2</u> of <u>2</u> |
|--------------------|--|

| | | | |
|---|-----------------|---|-----------------------|
| Name of Additional Joint Inventor, if any: | | <input type="checkbox"/> A petition has been filed for this unsigned inventor | |
| Given Name <u>Louise</u> | | Family Name or Surname <u>Sengupta</u> | |
| Inventor's Signature <u>Louise Sengupta</u> | | Date <u>December 5, 2001</u> | |
| Residence: City <u>Ellicott City</u> | State <u>MD</u> | Country <u>US</u> | Citizenship <u>US</u> |
| Mailing Address <u>3210 Boones Lane</u> | | | |
| Mailing Address | | | |
| City <u>Ellicott City</u> | State <u>MD</u> | ZIP <u>21042</u> | Country <u>US</u> |
| Name of Additional Joint Inventor, if any: | | <input type="checkbox"/> A petition has been filed for this unsigned inventor | |
| Given Name | | Family Name or Surname | |
| Inventor's Signature | | Date | |
| Residence: City | State | Country | Citizenship |
| Mailing Address | | | |
| Mailing Address | | | |
| City | State | ZIP | Country |
| Name of Additional Joint Inventor, if any: | | <input type="checkbox"/> A petition has been filed for this unsigned inventor | |
| Given Name | | Family Name or Surname | |
| Inventor's Signature | | Date | |
| Residence: City | State | Country | Citizenship |
| Mailing Address | | | |
| Mailing Address | | | |
| City | State | ZIP | Country |

Burden Hour Statement: This form is estimated to take 21 minutes to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

PTO/SB/01 (03-01)

Approved for use through 10/31/2002. OMB 0651-0032

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

| | | |
|---|------------------------|--------------|
| DECLARATION FOR UTILITY OR DESIGN PATENT APPLICATION (37 CFR 1.63) <input type="checkbox"/> Declaration Submitted with Initial Filing OR <input checked="" type="checkbox"/> Declaration Submitted after Initial Filing (surcharge (37 CFR 1.16 (e)) required) | Attorney Docket Number | 283014-00030 |
| | First Named Inventor | Youngfei Zhu |
| | COMPLETE IF KNOWN | |
| | Application Number | 09/932,749 |
| | Filing Date | 8/17/01 |
| | Group Art Unit | 2817 |
| Examiner Name | | |

COPY OF PAPERS
ORIGINAL FILED

02/11/02



As a below named inventor, I hereby declare that:

My residence, mailing address, and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

ELECTRONICALLY TUNABLE COMBLINE FILTERS TUNED BY TUNABLE DIELECTRIC CAPACITORS

(Title of the Invention)

the specification of which

☐ is attached hereto

OR

☒ was filed on (MM/DD/YYYY)

08/17/2001

as United States Application Number or PCT International

Application Number 09/932,749 and was amended on (MM/DD/YYYY) (if applicable).

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment specifically referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application.

I hereby claim foreign priority benefits under 35 U.S.C. 119(a)-(d) or (f), or 385(b) of any foreign application(s) for patent, inventor's or plant breeder's rights certificate(s), or 385(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below, by checking the box, any foreign application for patent, inventor's or plant breeder's rights certificate(s), or any PCT international application having a filing date before that of the application on which priority is claimed.

| Prior Foreign Application Number(s) | Country | Foreign Filing Date (MM/DD/YYYY) | Priority Not Claimed | Certified Copy Attached? | |
|-------------------------------------|---------|----------------------------------|--------------------------|--------------------------|--------------------------|
| | | | | YES | NO |
| | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

☐ Additional foreign application numbers are listed on a supplemental priority data sheet PTO/SB/02B attached hereto:

[Page 1 of 2]

Burden Hour Statement: This form is estimated to take 21 minutes to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

PTO/SB/01 (03-01)

Approved for use through 10/31/2002. OMB 0651-0032

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

DECLARATION — Utility or Design Patent Application

| | | | | | |
|---|--|---|--|---|--|
| Direct all correspondence to: <input type="checkbox"/> | | Customer Number or Bar Code Label | | OR <input checked="" type="checkbox"/> Correspondence address below | |
| Name Robert P. Lenart | | | | | |
| Address Pietragallo, Bosick & Gordon One Oxford Centre, 38th Floor, 301 Grant Street | | | | | |
| City Pittsburgh | | State PA | | ZIP 15219 | |
| Country United States | | Telephone (412) 263-4399 | | Fax (412) 261-0915 | |
| I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon. | | | | | |
| NAME OF SOLE OR FIRST INVENTOR: | | <input type="checkbox"/> A petition has been filed for this unsigned inventor | | | |
| Given Name (first and middle (if any)) | | Yongfei | | | |
| Family Name or Surname | | Zhu | | | |
| Inventor's Signature | | Date | | | |
| Residence: City | | Columbia | | State MD | |
| Country | | US | | Citizenship China | |
| Mailing Address 5275 Rivendell Lane, Suite 6 | | | | | |
| City | | Columbia | | State MD | |
| ZIP | | 21044 | | Country US | |
| NAME OF SECOND INVENTOR: | | <input type="checkbox"/> A petition has been filed for this unsigned inventor | | | |
| Given Name (first and middle (if any)) | | Yu | | | |
| Family Name or Surname | | Rong | | | |
| Inventor's Signature | | Date 12/07/2001 | | | |
| Residence: City | | Germantown | | State MD | |
| Country | | US | | Citizenship China | |
| Mailing Address 17806 Bromfield Place | | | | | |
| City | | Germantown | | State MD | |
| ZIP | | 20874 | | Country US | |
| <input type="checkbox"/> Additional inventors are being named on the _____ supplemental Additional Inventor(s) sheet(s) PTO/SB/02A attached hereto. | | | | | |

(Page 2 of 2)

Please type a plus sign (+) inside this box

+

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Approved for use through 10/31/2002, OMB 0651-0035

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

COPY OF PAPERS
ORIGINALLY FILED
02/11/02**POWER OF ATTORNEY OR
AUTHORIZATION OF AGENT**

| | |
|------------------------|-------------------------|
| Application Number | 09/932,749 |
| Filing Date | 8/17/01 |
| First Named Inventor | Yongfei Zhu |
| Title | Electronically Tunable* |
| Group Art Unit | 2817 |
| Examiner Name | |
| Attorney Docket Number | 283014-00030 |

*Combine Filters Tuned by Tunable Dielectric Capacitors

I hereby appoint:

☒ Practitioners at Customer Number

29694

Place Customer
Number Bar Code
Label here

OR

☐ Practitioner(s) named below:

| Name | Registration Number |
|------|---------------------|
| | |
| | |
| | |
| | |

as my/our attorney(s) or agent(s) to prosecute the application identified above, and to transact all business in the United States Patent and Trademark Office connected therewith.

Please change the correspondence address for the above-identified application to:

☐ The above-mentioned Customer Number.

OR

☐ Practitioners at Customer NumberPlace Customer
Number Bar Code
Label here

OR

☒ Firm or
Individual Name

Robert P. Lenart

Address

Pietragallo, Bosick & Gordon

Address

One Oxford Centre, 38th Floor, 301 Grant Street

City

Pittsburgh

State

PA

Zip

15219

Country

USA

Telephone

(412) 263-4399

Fax

(412) 261-0915

I am the:

☒ Applicant/Inventor.☐ Assignee of record of the entire interest. See 37 CFR 3.71.

Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96).

SIGNATURE of Applicant or Assignee of Record

Name

Yongfei Zhu

Signature



Date

11/30/01

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below.

☒ Total of 6 forms are submitted.

Burden Hour Statement: This form is estimated to take 3 minutes to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Please type a plus sign (+) inside this box



PTO/SB/01 (02-01)

Approved for use through 10/31/2002. OMB 0651-0035

U.S. Patent and Trademark Office, U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

**POWER OF ATTORNEY OR
AUTHORIZATION OF AGENT**

| | |
|------------------------|-------------------------|
| Application Number | 09/932,749 |
| Filing Date | 8/17/01 |
| First Named Inventor | Yongfei Zhu |
| Title | Electronically Tunable* |
| Group Art Unit | 2817 |
| Examiner Name | |
| Attorney Docket Number | 283014-00030 |

*Combine Filters Tuned by Tunable Dielectric Capacitors

I hereby appoint:

☒ Practitioners at Customer Number

29694

Place Customer
Number Bar Code
Label here

OR

☐ Practitioner(s) named below:

| Name | Registration Number |
|------|---------------------|
| | |
| | |
| | |
| | |

as my/our attorney(s) or agent(s) to prosecute the application identified above, and to transact all business in the United States Patent and Trademark Office connected therewith.

Please change the correspondence address for the above-identified application to:

☐ The above-mentioned Customer Number.

OR

☐ Practitioners at Customer NumberPlace Customer
Number Bar Code
Label here

OR

☒ Firm or
Individual Name

Robert P. Lenart

Address Pietragallo, Bosick & Gordon

Address One Oxford Centre, 38th Floor, 301 Grant Street

City Pittsburgh State PA Zip 15219

Country USA

Telephone (412) 263-4399 Fax (412) 261-0915

I am the:

☒ Applicant/Inventor.
☐ Assignee of record of the entire interest. See 37 CFR 3.71.
Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96).
SIGNATURE of Applicant or Assignee of Record

Name Yu Rong

Signature *Yu Rong*

Date 12/07/2001

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below.

☒ Total of 6 forms are submitted.

Burden Hour Statement: This form is estimated to take 3 minutes to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Please type a plus sign (+) inside this box → ☐

PTO/SB/81 (02-01)

Approved for use through 10/31/2002. OMB 0651-0035

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

**POWER OF ATTORNEY OR
AUTHORIZATION OF AGENT**

| | |
|------------------------|-------------------------|
| Application Number | 09/932,749 |
| Filing Date | 8/17/01 |
| First Named Inventor | Yongfei Zhu |
| Title | Electronically Tunable* |
| Group Art Unit | 2817 |
| Examiner Name | |
| Attorney Docket Number | 283014-00030 |

*Combine Filters Tuned by Tunable Dielectric Capacitors

I hereby appoint:

☒ Practitioners at Customer Number

29694

Place Customer
Number Bar Code
Label hereOR
☐ Practitioner(s) named below:

| Name | Registration Number |
|------|---------------------|
| | |
| | |
| | |
| | |

as my/our attorney(s) or agent(s) to prosecute the application identified above, and to transact all business in the United States Patent and Trademark Office connected therewith.

Please change the correspondence address for the above-identified application to:

☐ The above-mentioned Customer Number.

OR

☐ Practitioners at Customer NumberPlace Customer
Number Bar Code
Label here☒ Firm or
Individual Name

Robert P. Lenart

Address Pietragallo, Bosick & Gordon

Address One Oxford Centre, 38th Floor, 301 Grant Street

City Pittsburgh State PA Zip 15219

Country USA

Telephone (412) 263-4399 Fax (412) 261-0915

I am the:

☒ Applicant/Inventor.☐ Assignee of record of the entire interest. See 37 CFR 3.71.
Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96).**SIGNATURE of Applicant or Assignee of Record**

Name Kenneth Hersey

Signature *Kenneth Hersey*

Date 12-5-01

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below.

☒ Total of 6 forms are submitted.

Burden Hour Statement: This form is estimated to take 3 minutes to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.



Please type a plus sign (+) inside this box → PTO/SB/81 (02-01)
Approved for use through 10/31/2002. OMB 0651-0035

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

**POWER OF ATTORNEY OR
AUTHORIZATION OF AGENT**

| | |
|------------------------|-------------------------|
| Application Number | 09/932,749 |
| Filing Date | 8/17/01 |
| First Named Inventor | Yongfei Zhu |
| Title | Electronically Tunable* |
| Group Art Unit | 2817 |
| Examiner Name | |
| Attorney Docket Number | 283014-00030 |

*Combine Filters Tuned by Tunable Dielectric Capacitors

I hereby appoint:

☒ Practitioners at Customer Number

29694 →

Place Customer
Number Bar Code
Label here

OR

☐ Practitioner(s) named below:

| Name | Registration Number |
|------|---------------------|
| | |
| | |
| | |
| | |

as my/our attorney(s) or agent(s) to prosecute the application identified above, and to transact all business in the United States Patent and Trademark Office connected therewith.

Please change the correspondence address for the above-identified application to:

☐ The above-mentioned Customer Number.

OR

☐ Practitioners at Customer NumberPlace Customer
Number Bar Code
Label here

OR

☒ Firm or
Individual Name

Robert P. Lenart

Address

Pietragallo, Bosick & Gordon

Address

One Oxford Centre, 38th Floor, 301 Grant Street

City

Pittsburgh

State

PA

Zip

15219

Country

USA

Telephone

(412) 263-4399

Fax

(412) 261-0915

I am the:

☒ Applicant/Inventor.☐ Assignee of record of the entire interest. See 37 CFR 3.71.

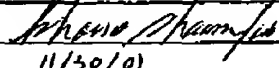
Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96).

SIGNATURE of Applicant or Assignee of Record

Name

Khosro Shamsaifar

Signature



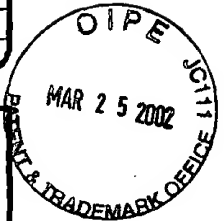
Date

11/30/01

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below.

☒ Total of 6 forms are submitted.

Burden Hour Statement: This form is estimated to take 3 minutes to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.



Please type a plus sign (+) inside this box



PTO/SB/81 (02-01)

Approved for use through 10/31/2002, OMB 0651-0035

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

**POWER OF ATTORNEY OR
AUTHORIZATION OF AGENT**

| | |
|------------------------|-------------------------|
| Application Number | 09/932,749 |
| Filing Date | 8/17/01 |
| First Named Inventor | Yongfei Zhu |
| Title | Electronically Tunable* |
| Group Art Unit | 2817 |
| Examiner Name | |
| Attorney Docket Number | 283014-00030 |

*Combine Filters Tuned by Tunable Dielectric Capacitors

I hereby appoint:

☒ Practitioners at Customer Number

29694

Place Customer
Number Bar Code
Label here
☐ Practitioner(s) named below:

| Name | Registration Number |
|------|---------------------|
| | |
| | |
| | |
| | |

as my/our attorney(s) or agent(s) to prosecute the application identified above, and to transact all business in the United States Patent and Trademark Office connected therewith.

Please change the correspondence address for the above-identified application to:

☐ The above-mentioned Customer Number.

OR

☐ Practitioners at Customer Number
Place Customer
Number Bar Code
Label here

OR

| | | | | | |
|---|---|-------|----------------|-----|-------|
| <input checked="" type="checkbox"/> Firm or Individual Name | Robert P. Lenart | | | | |
| Address | Pietragallo, Bosick & Gordon | | | | |
| Address | One Oxford Centre, 38th Floor, 301 Grant Street | | | | |
| City | Pittsburgh | State | PA | Zip | 15219 |
| Country | USA | | | | |
| Telephone | (412) 263-4399 | Fax | (412) 261-0915 | | |

I am the:

☒ Applicant/Inventor.

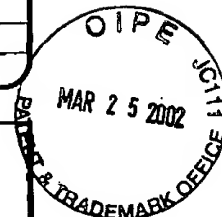
☐ Assignee of record of the entire interest. See 37 CFR 3.71.
Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96).
SIGNATURE of Applicant or Assignee of Record

| | |
|-----------|--------------------------|
| Name | Ernest P. Ekelman |
| Signature | <i>Ernest P. Ekelman</i> |
| Date | 11-30-01 |

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below.

☒ Total of 6 forms are submitted.

Burden Hour Statement: This form is estimated to take 3 minutes to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.



Please type a plus sign (+) inside this box → ☐

PTO/SB/81 (02-01)

Approved for use through 10/31/2002. OMB 0651-0035

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

**POWER OF ATTORNEY OR
AUTHORIZATION OF AGENT**

| | |
|------------------------|-------------------------|
| Application Number | 09/932,749 |
| Filing Date | 8/17/01 |
| First Named Inventor | Yongfei Zhu |
| Title | Electronically Tunable* |
| Group Art Unit | 2817 |
| Examiner Name | |
| Attorney Docket Number | 283014-00030 |

*Combine Filters Tuned by Tunable Dielectric Capacitors

I hereby appoint:

☒ Practitioners at Customer Number

29694 →

Place Customer
Number Bar Code
Label here

OR

☐ Practitioner(s) named below:

| Name | Registration Number |
|------|---------------------|
| | |
| | |
| | |
| | |

as my/our attorney(s) or agent(s) to prosecute the application identified above, and to transact all business in the United States Patent and Trademark Office connected therewith.

Please change the correspondence address for the above-identified application to:

☐ The above-mentioned Customer Number.

OR

☐ Practitioners at Customer NumberPlace Customer
Number Bar Code
Label here

OR

☒ Firm or
Individual Name

Robert P. Lenart

Address Pietragallo, Bosick & Gordon

Address One Oxford Centre, 38th Floor, 301 Grant Street

City Pittsburgh

State

PA

Zip

15219

Country USA

Telephone (412) 263-4399

Fax

(412) 261-0915

I am the:

☒ Applicant/Inventor.☐ Assignee of record of the entire interest. See 37 CFR 3.71.

Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96).

SIGNATURE of Applicant or Assignee of Record

Name Louise C. Sengupta

Signature *Louise C. Sengupta*

Date 12/05/01

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below.

☒ Total of 6 forms are submitted.

Burden Hour Statement: This form is estimated to take 3 minutes to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.